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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/257,108

02/24/99

CHAUDHARI

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U-012119-9

IM62/0419

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EXAMINER

DONELY, C

ART UNIT

PAPER NUMBER

1754

DATE MAILED:

04/19/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/257,108

Applicant(s)

CHAUDHARI ET AL.

Examiner

Cynthia M Donley

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some \* c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☒ received.
2. ☐ received in Application No. (Series Code / Serial Number) \_\_\_\_\_.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

## Attachment(s)

- 14) ☐ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 17) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai et al in view of Rashkin. Kawai et al teaches substantially the claimed subject matter except the percentages of chromium and zinc and the method for preparing the catalyst.

Kawai et al teaches a catalyst containing copper, chromium, aluminum and zinc (column 4, lines 39-53), wherein copper comprises 20 to 80 mole % of the catalyst which overlaps the range of 10 to 40 mole % of the instant invention (column 5, lines 17-18) and aluminum comprises 0.5 to 20 mole % which overlaps the range of 10 to 30 mole % of the instant invention (column 5, lines 24-27). Kawai et al teaches that the source of copper may be salts of copper, including copper nitrate, copper sulfate or copper chloride (column 5, lines 40-42). The source of aluminum may be aluminum oxide (column 5, line 31). The source of zinc may be zinc oxide (column 4, line 43).

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Rashkin teaches a copper-chromium-zinc-barium catalyst, wherein copper comprises 30 to 55 mole % of the catalyst, chromium comprises 30 to 57 mole % and zinc comprises 1 to 13 mole % (abstract, lines 5-8). Each of these ranges overlaps the ranges of the instant invention. It is obvious to one of ordinary skill in the art to include copper, chromium, zinc and aluminum such that the total percentage of the components is 100% if these are the only components in the catalyst as taught by Kawai et al. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include chromium and zinc in the proportions taught by Rashkin in the catalyst of Kawai et al because these proportions result in a more effective catalyst.

Rashkin teaches a process for preparing the above catalyst which comprises preparing aqueous solutions of the starting components (aluminum, copper and zinc), and adding to this mixture a solution of chromium (ammonium dichromate), under stirring conditions to obtain the precipitate, separating the precipitate by conventional methods, drying the precipitate at a temperature around 110°C, calcining the dried material in static air at a temperature ranging from 250 to 400°C for at least 2 hours, to obtain the desired product (column 4, lines 31-44). It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare the catalyst of Kawai et al by the process taught by Rashkin because this process results in a catalyst having improved

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selectivity and strength. It is obvious to one of ordinary skill in the art that the catalyst of Kawai et al and Rashkin would exhibit an XRD pattern as shown in the instant invention because the catalyst of the prior art has the same components and is prepared in a similar manner.

### ***Response to Arguments***

3. The amendments and revised abstract submitted by Applicant on 3/15/00 have been noted, and the claim and specification objections and 35 USC § 112 claim rejections are withdrawn.

4. Applicant's arguments filed 3/15/00 have been fully considered but they are not persuasive.

Applicant argues that the catalysts of the claimed invention require the presence of copper, chromium, aluminum and zinc. Kawai teaches that the catalyst consists of copper and zinc **and/or** chromium **and** at least one of molybdenum, tungsten, magnesium, barium, **aluminum**, calcium, zirconium, cobalt, manganese and nickel (column 4, lines 39-53). It would have been obvious to one of ordinary skill in the art to replace magnesium or barium with aluminum since Kawai teaches that these components are all in one group from which one must choose a component.

The use and selectivity of Kawai's and Rashkin's inventions are moot given the Applicant does not claim a use for the invention.

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***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia M Donley whose telephone number is (703) 305-0214. The examiner can normally be reached on M-R and alternate F, 8:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (703) 308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0661.

CMD *Cynthia Ray*  
April 14, 2000

*Steven P. Griffin*  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700  
4/19/00